Amendments to the Claims

The current listing of the claims replaces all previous amendments and listings of the claims.

1.-10. (Canceled)

11. (Currently Amended) A process for amplifying a fluorescence signal emitted by an areal sample supported by a support in response to an excitation signal, the support transmitting all or part of the fluorescence signal, comprising:

interposing a thin layer between the support and the areal sample~~; and~~ ,

~~flooding the areal sample with a liquid medium,~~

wherein the thin layer has a refractive index greater than a refractive index of the support and than a refractive index of ~~the liquid~~ a medium flooding the areal sample,

a thickness of the thin layer being selected so that the excitation and fluorescence signals pass in almost normal incidence through the thin layer, whereby the thin layer transmits all or part of the fluorescence signal which is measured after passing through the support.

12. (Previously Presented) A process according to claim 11, wherein the support supporting the areal sample is made of a material selected from glass, quartz, silica, or plastic materials selected from polystyrene, polypropylene, polycarbonates, polymethylmethacrylates.

13. (Previously Presented) A process according to claim 11, wherein the thin layer interposed between the support and the areal sample is of a material chosen from silicon nitride, silicon carbide, titanium oxides, aluminium oxide, ZrO_2, ZrO_4Ti, HfO_2, Y_2O_3, diamond, MgO, oxynitrides ($Si_xO_yN_z$), fluorinated materials, YF_3, MgF_2.

14. (Previously Presented) A process according to claim 11, wherein said thin layer is a layer obtained on the support by one of the following methods: vapour deposition,